

Abstract

5 The present invention relates to a method for producing a plant lipoxygenase with
modified positional specificity toward arachidonic acid and to its use for
hydroperoxylation of arachidonic acid. In particular, the inventive LOX makes it
possible to produce for the first time (11S,14Z,12E,8Z,5Z)-11-hydroperoxy-14,12,8,5-
eicosatetraenic acids at a large scale. To this end, arachidonic acid is incubated as
substrate with the inventive LOX under appropriate conditions. Hydroperoxylation of
10 the arachidonic acid is then effected, preferably at position 11, with secondary
products which are hydroperoxylated at position 8 or position 5 or at position 11 and 8
and 5.

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